



Seabed Minerals Authority
Runanga Takere Moana
COOK ISLANDS

G04: Interim Guideline on Submission of Biological, Geological, and other Data

Prepared by the Cook Islands Seabed Minerals Authority

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1. Purpose

The Cook Islands Seabed Minerals Authority (**Authority**) is looking to secure key data sets and samples for the long term benefit of stakeholders. This Guideline is issued by the Authority pursuant to section 11(e) of the Seabed Minerals Act 2019 (**Act**) and regulation 50 of the Seabed Minerals (Exploration) Regulations 2019 (**Exploration Regulations**). This Guideline provides information to Licence Holders and other stakeholders in relation to the type samples of biology and geology and other core data sets. The Authority will use this Guideline to assist in the collation, creation and maintenance of a reference set of biological and geological and other core data for use in future research in the Cook Islands Exclusive Economic Zone.

This Guideline applies and must be read in conjunction with “SG: An Operating Framework for Standards and Guidelines relating to Seabed Minerals Activities”

2. Legislative Context

The following legislative provisions are relevant to this Guideline:

- a) Regulation 42 of the Exploration Regulations discusses the collection, record, analysis and keeping of samples and requires that Samples be taken and maintained in a manner that takes into account any applicable Guideline;
- b) Regulation 50(3) of the Exploration Regulations provide that Guidelines of a technical or administrative nature can be issued to support the implementation of the Act, Exploration Regulations and Standards.
- c) S01 Interim Standard on Expedition planning and reporting which sets out the information that must be provided to the Authority before, during and after an Expedition.

The contents of this Guideline document are not mandatory, but are subject to the relevant statutory requirements under the Act, Exploration Regulations and Standards. For the avoidance of doubt any information supplied by the Licence Holder to the Authority that may qualify as confidential information will be managed as provided for in section 18A of the Act.

If a Licence Holder chooses not to follow any particular part of this Guideline, it must provide, in writing to the Authority, an adequate explanation as to why.

3. Scope

S01 requires a License Holder to submit a record of all data gathered and samples collected including the final destination of samples. This Guideline discusses type samples and three classes of data are considered here: a series of type samples based on both morphology and DNA typing; a series of type samples that represent the nodule facies and/or host geology at each sample site; and Multibeam Echosounder Data.

4. Biological type samples and analysis

Physical biological samples collected for environmental baseline and impact assessment are to be processed and used as needed by the Licence Holder, including as required in order to carry out reasonable quality assurance and quality control requirements (**QA/QC**).

When analysis of samples is completed by the License Holder, first right of storage for appropriately preserved samples is to be offered to the Authority. Specifically identified holotype/lectotype/syntype and paratype specimens should be offered to the Authority, together with representative samples of biological community species. It should be noted that designation of types may take considerable time after surveys are complete and initial description made.

If the Authority accepts offer of a the physical sample, then the Licence Holder will dispatch to the address supplied by the Authority on Incoterms Cost Insurance and Freight, along with any requested information to support clearance and compliance with various permit requirements (e.g., CITES).

The Authority may have specific requirements regarding packaging and preservation of samples to aid in their curation.

Any supplied physical samples will need to have information relating to:

- a) location and time metadata;
- b) nature of collection gear;
- c) quantity of material;
- d) description of processing and preservation methods;
- e) material safety data for preservation medium
- f) results of processing (e.g. DNA analysis results, identifier of species); and
- g) any other relevant information including analysis conducted to date.

Photographic type samples should also be offered to the Authority. It is common scientific practice to photograph fresh specimens for true colour and size. This may include copies of images or may involve access to online data repositories. In both cases the images should have accompanying metadata as specified in the list above. Photographic information should be made available to the Authority as soon as practicable once QA/QC processes are complete.

5. Geological type samples and analysis

Physical rock and sediment samples (including nodules) collected for mineral resource and ore reserve estimation and environmental habitat classification are to be processed and used

as needed by the Licence Holder, including reasonable QA/QC requirements. Where possible a representative aliquot or subsample is to be offered to the Authority.

If the Authority accepts the offer of the physical sample, then the Licence Holder will dispatch to the address supplied by the Authority on Incoterms Cost Insurance and Freight, along with any requested information to support clearance.

Any supplied physical samples will need to have accompanying:

- a) location and time metadata;
- b) nature of collection gear;
- c) quantity of material;
- d) description of any processing;
- e) results of any processing; and
- f) any other relevant information including chemical and/or mineralogical analysis.

Photographic type samples should also be offered to the Authority. This may include copies of images or may involve access to online data repositories. In both cases the images should have accompanying metadata as specified above. Photographic information should be made available to the Authority as soon as practicable once QA/QC processes are complete.

6. Other data and analysis

Ship-mounted multibeam data is the only other data type provided for within this particular Guideline. It is anticipated that multibeam survey data will have preliminary processing occur at sea and final processing some time later. Copies of the data files will be supplied to Authority, within ten working days of completion of processing. The data files should include:

- a) configuration files including offsets of navigation sensors;
- b) calibration files including sound-velocity data used and results of any patch tests;
- c) static files for both bathymetry and backscatter;
- d) ungridded xyz files;
- e) gridded xyz files processed (cleaned) and unprocessed, including outputs from backscatter processing (e.g. Geocoder or similar);
- f) exported image files (presumably from Caris HIPS and SIPs or similar);
- g) processed image files;
- h) processed ascii grids;
- i) static files for data quality including sounding standard deviation and density;
- j) static files for navigation including heading, pitch, roll and speed;
- k) cover report by responsible hydrographic surveyor including summary of QA/QC process.

7. Other References

Useful information on the handling of biological samples is given in:

Schiaparelli, S.; Schnabel, K.E.; Richer de Forges, B.; Chan, T-Y. (2016). Sorting, Recording, Preservation and Storage of Biological Samples. Chapter 15 p.338-367: in: Clark, M.R.; Consalvey, M.; Rowden, A.A. (eds). Biological sampling in the deep sea. Wiley Blackwell, Oxford, UK.

Society for the Preservation of Natural History Collections (2010). Guidelines for the care of natural history collections. URL: <http://cool.conservation-us.org/byorg/spnhc/spnhc1.html>

Disclaimer: This document, developed by the Seabed Minerals Authority, does not replace or amend the requirements of the Seabed Minerals Act 2019 and associated regulations, and exploration licence obligations which should be read in conjunction with this Guideline.

It is made available on the understanding that the Cook Islands Government is not thereby engaged in rendering legal or other professional advice. Before relying on this material in any important matter, users should carefully evaluate its accuracy, currency, completeness and relevance for their purposes, and obtain appropriate legal or other professional advice relevant to their particular circumstances.

It is anticipated this Guideline will be amended from time to time. The most up-to-date version of the Guideline is available at www.sbma.gov.ck.

8. Version Control

Rev	Date
Version 1	7 September 2022